REMARKS

Present Status of the Application

Claims 1, 7-8 and 10-11 are rejected under 35 U.S.C 103 (a) as being unpatentable

over Kim et al.(US Pat. 5,990,978, "Kim 978" hereinafter) in view of Kim et al (US Pat.

6,822,691, "Kim 691" hereinafter) and Parikh (US Pat. 6,414,719, "Parikh 719"

hereinafter). Claims 3-5 are rejected under 35 U.S.C 103 (a) as being unpatentable over

Kim 978 in view of Kim 691, Parikh 719 and AAPA (Applicant's Admitted Prior Art).

Claims 6 and 9 are objected to as being dependent upon a rejected claim, but would be

allowable if rewritten in independent form including all of the limitation of the base claim

and any intervening claims.

In response thereto, Applicants have respectfully rewritten claims 6 and 9 in

independent form including all of the limitation of the base claim and any intervening

claims. Claims 6 and 9 are in a condition of allowance.

Furthermore, Applicants have respectfully cancelled claims 1-5, 7-8 and 10-11 and

added new claims 12-18. After entering the amendment, claims 6, 9, 12-18 remain pending

in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Claim Amendment

Claims 12-18 are newly added in the present application for clearly and precisely

claim the subject matters that the Applicants regard as their invention. More particularly,

the method of motion detection for a 3D comb filter video decoder, as addressed in newly

added claim 12, comprising **sampling a composite video signal** to obtain a sampled data

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$F_{m+1}P_{x,y}$, wherein $F_{m+1}P_{x,y}$ represents a sampled data of a yth pixel on an xth line of an $(m+1)^{th}$ frame in the composite video signal, and m, x, y are positive integers greater than or equal to 0; and obtaining three stored sampled data $F_mP_{x,y}$, $F_{m-1}P_{x,y}$, $F_{m-2}P_{x,y}$, previously **sequentially sampled directly from the composite video signal and stored in a storing means**. The amendment is supported in FIG.5 (Fm+1 from the composite video signal, and Fm, Fm-1, Fm-2 from memory 540), Para. [0044] and in step S401, S404 of FIG.4.

Applicants respectfully submit that none of prior arts of record disclose "sampling a composite video signal to obtain a sampled data $F_{m+1}P_{x,y}$, wherein $F_{m+1}P_{x,y}$ represents a sampled data of a yth pixel on an xth line of an $(m+1)^{th}$ frame in the composite video signal, and m, x, y are positive integers greater than or equal to 0; and obtaining three stored sampled data $F_mP_{x,y}$, $F_{m-1}P_{x,y}$, $F_{m-2}P_{x,y}$, previously sequentially sampled directly from the composite video signal and stored in a storing means; using the sampled data $F_{m+1}P_{x,y}$ and the three stored sampled data $F_mP_{x,y}$, $F_{m-1}P_{x,y}$, $F_{m-2}P_{x,y}$ to determine a motion/still status of the composite video signal" as claimed in claim 12.

As stated in Page 2 of Final Office Action dated April 10, 2007, the Office Action agreed that the cited references disclosed interlaced to progressive conversion. The Office Action asserted that "it is known to evaluate more than two pixel values when ascertaining the status (motion/still) of an image" and "[T]he AAPA (Fig.3a) discloses a system which detects the status using (F_m and F_{m+1}), where the applicant's invention is also utilizing (F_{m-1} and F_{m-2}), thus the examiner's premise was the use of addition points/pixels which provides no expected result." Applicants do not agree with such assertion.

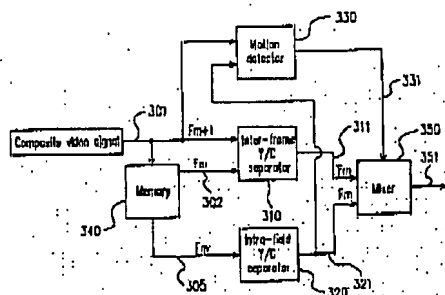The FIG.3a of AAPA **does not disclose** a system which detects the status using

FIG. 3A (PRIOR ART)

frames F_m and F_{m+1}, instead, the motion detector 330 detects the status using the frame F_{m+1} and the separated video signal 321 from the intra-field Y/C separator 320 after performing a Y/C separation according to the space correlation among the pixels in the frame Fm (Para. [0013] of the Specification). As stated in the Para. [0018] of the Specification:

The method of motion detection of the prior art, a Y/C data is first calculated using the intra-field Y/C separation method and compares it with a Y/C data of the previous frame, and then determines a final Y/C data which is output according to the comparison result. Therefore, a chicken-egg problem occurs. If the intra-field Y/C separation can accurately separate the Y/C data in the beginning stage, the inter-frame Y/C separation is not required, and there is no need to calculate the motion factor. However, if the Y/C data calculated in the beginning stage is not correct, the motion factor, which is calculated based on the incorrect Y/C data is not correct, either. Therefore, its correctness is greatly impacted if the final Y/C data is determined based on an incorrect motion factor.

However, the method of motion detection for a 3D comb filter video decoder as claimed in claim 12 of the invention, the a sampled data $F_{m+1}P_{x,y}$, three stored sampled data $F_mP_{x,y}$, $F_{m-1}P_{x,y}$, $F_{m-2}P_{x,y}$, are all the sampled data sequentially and directly from the composite video signal, instead of using the Y/C data. The status (motion/still) of an

image can be corrected detected.

Thus, independent claim 12 is allowable for at least the reasons above and the rejections should be withdrawn.

Because independent claim 12 is allowable over the prior art of record, its dependent claims 13-18 are allowable as a matter of law, for at least the reason that these dependent claims contain all features/elements/steps of their respective independent claim 1. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Further in view of the dependent claims, claims 13 and 15 further explained that why four sequentially sampled frame data are used in the method of motion detection for a 3D comb filter video decoder as claimed.

Claim 13 recites "the composite video signal is a signal for an NTSC system, the step of sampling the composite video signal uses a frequency which is 4 times the subcarrier frequency in the composite video signal to sample, wherein the sampled data $F_{m+1}P_{x,y}$ and the three previously sequentially sampled data $F_mP_{x,y}$, $F_{m-1}P_{x,y}$, $F_{m-2}P_{x,y}$ are obtained by directly sampling the composite video signal when the subcarrier phase is equal to 0, 0.5π, π, and 1.5π, sequentially." None of prior arts of record disclosed that "in NTSC system, the sampled data $F_{m+1}P_{x,y}$ and the three previously sequentially sampled data $F_mP_{x,y}$, $F_{m-1}P_{x,y}$, $F_{m-2}P_{x,y}$ are obtained by directly sampling the composite video signal when the subcarrier phase is equal to 0, 0.5π, π, and 1.5π, sequentially."

Claim 15 recites "the composite video signal is a signal for a PAL system, the step of sampling the composite video signal uses a frequency which is 4 times the subcarrier frequency in the composite video signal to sample, wherein the sampled data $F_{m+1}P_{x,y}$ and

the three previously sequentially sampled data $F_m P_{x,y}$, $F_{m-1} P_{x,y}$, $F_{m-2} P_{x,y}$ are obtained by directly sampling the composite video signal when the subcarrier phase is equal to 0.25π, 0.75π, 1.25π, and 1.75π, sequentially." None of prior arts of record disclosed that "in PAL system, the sampled data $F_{m+1} P_{x,y}$ and the three previously sequentially sampled data $F_m P_{x,y}$, $F_{m-1} P_{x,y}$, $F_{m-2} P_{x,y}$ are obtained by directly sampling the composite video signal when the subcarrier phase is equal to 0, 0.5π, π, and 1.5π, sequentially."

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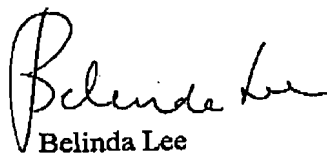Docket No.: 12304-US-PA
Application No.: 10/708,875

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 6, 9, 12-18 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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